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AGILENT TECHNOLOGIES, INC.
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EXAMINER

WEST, JEFFREY R

ART UNIT	PAPER NUMBER
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2857

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/955,796	SCHLOTZHAUER ET AL.	
	Examiner	Art Unit	
	Jeffrey R. West	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 and 31-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 and 31-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Appeal Brief

2. In response to the Appeal Brief filed October 02, 2006, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Objections

3. Claims 22, 24, 31, and 37 are objected to because of the following informalities:

In claim 22, line 2, to avoid problems of antecedent basis, "the variation function" should be ---the user-defined variation function---.

In claim 24, line 2, to avoid problems of antecedent basis, "the variation function" should be ---the user-defined variation function---.

In claim 31, line 1, to avoid problems of antecedent basis, "the variation function" should be ---the user-defined variation function---.

In claim 31, line 2, to avoid problems of antecedent basis, "the measurement" should be ---the measurement process---.

In claim 37, line 1, "A method as in claim 21" should be ---A computer readable medium as in claim 21---.

In claim 37, line 1, to avoid problems of antecedent basis, "the variation function" should be ---the user-defined variation function---.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 40 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, specifically, as being incomplete for omitting

essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claim 40 recites, "A measurement system comprising: a computer readable medium in accordance with claim 21; and a physical interface operable to supply signals to a device under test and receive signals from a device under test." As claimed, however, the physical interface contains no structural relationship to the computer readable medium to permit the functionality of the computer readable medium to be carried out. Such a lack of an essential structural relationship renders claim 40 unclear to one having ordinary skill in the art.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-29 and 31-39 are considered to be non-statutory. It has been held that the claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). In determining whether the claim is for a

“practical application,” the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result is “useful, tangible and concrete.”

Furthermore, a process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459.

Independent claim 1, and dependent claims 2-20, provides a concluding step of “associating the function call instruction with the user-defined variation function prior to execution of the measurement process wherein the function call instruction passes control to the user-defined variation function when the variation point in the computer program is reached.” This final step of “associating and pass[ing] control” does not produce a “useful, concrete and tangible result” but is instead a result of internal data/program manipulation that is not externally conveyed, specifically the method does not output, store, or produce any tangible form to accomplish a practical application. For this reason, claims 1-20 are considered to be non-statutory.

Claims 21-29 and 31-39 present a computer readable medium containing a program of software instructions. These software instructions themselves are considered to be data structures that do not define any functional interrelationships between the data structures and other claimed aspects of the invention which permit the data structure's functionality to be realized. It has been held that such a data

structure is considered to be non-statutory under 35 U.S.C. 101 (See e.g., Warmerdam 33 F.3d at 1361, 31 USPQ2d at 1760).

Further, apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement (See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036). Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application. In the instant case, similar to claims 1-20 described above, claims 21-29 and 31-39 result in instructions operable to "pass control to a user-defined variation function" wherein "the user-defined variation function operates to modify the measurement process and return control to the measurement process" which is not considered to be a "useful, concrete, and tangible" result since the measurement process modification only consists of internal data/program manipulation that is not externally conveyed, specifically, the instructions do not output, store, or produce any tangible form to accomplish a practical application.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4, 7-9, 14-29, 31-33, and 36-40, as may best be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,907,557 to Perez et al. (incorporating by reference U.S. Patent No. 6,401,220 to Grey et al.) in view of U.S. Patent No. 6,449,741 to Organ et al.

MPEP §2163.07(b) [R-3]: Incorporation by Reference: Instead of repeating some information contained in another document, an application may attempt to incorporate the content of another document or part thereof by reference to the document in the text of the specification. The information incorporated is as much a part of the application as filed as if the text was repeated in the application, and should be treated as part of the text of the application as filed.

With respect to claim 1, Perez discloses a method for a user of a measurement process to cause a variation in the measurement process (Grey et al.; column 2, lines 55-60 and column 11, lines 36-40), the measurement process comprising a sequence of operations controlled by a computer program (Grey et al.; column 11, lines 41-56 and column 12, lines 6-15) containing a variation point at which a function call instruction is inserted by a designer of the computer program (Grey et al.; column 12, lines 41-53) to pass control to a user-defined variation function (Grey et al.; column 14, lines 52-65), said method comprising determining the variation to the measurement process (Grey et al.; column 13, lines 50-58), providing a user-

generated process modification software module comprising the user-defined variation function for causing the variation (Grey et al.; column 12, lines 41-53 and column 14, lines 52-65), and associating the function call instruction with the user-defined variation function prior to execution of the measurement process, wherein the function call instruction passes control to the user-defined variation function when the variation point in the computer program is reached (Grey et al.; column 13, lines 50-58 and column 14, line 52 to column 15, line 9).

Perez also discloses that the user is permitted to modify the measurement process by configuring parameters (Perez et al.; column 4, lines 49-63 and column 10, line 57 to column 11, line 14), such as the parameters used through the user-defined variation function (Grey et al.; column 14, lines 52-65), while preventing the user from modifying the measurement process through particular sequences (Perez et al.; column 4, lines 49-63 and column 10, line 57 to column 11, line 14).

With respect to claims 2-4 and 31-33, Perez discloses that the process modification software module further comprises an interface servicing element that services an interface realized by the measurement process with the interface operating at a binary protocol (Grey et al.; column 13, lines 7-15).

With respect to claims 7 and 36, Perez discloses that said interface is determined by the user and is identified and passed into said measurement process (Grey et al.; column 13, lines 7-30).

With respect to claims 8 and 37, Perez discloses that said process modification software module is one of a computer program conforming to a software component

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specification for distributed applications or dynamically linked library (i.e. C, C++, JAVA, Visual Basic) (Grey et al.; column 13, lines 53-57 and column 14, lines 66-67).

With respect to claim 9, Perez discloses that the measurement process and the process modification software module are executed in a shared computer memory space (i.e. the test executive software performs the measurement and the measurement modification) (Grey et al.; column 11, lines 41-56 and column 58, lines 60-67)

With respect to claims 14-18 and 24-28, Perez discloses that said variation comprises modification of data (Grey et al.; column 15, lines 11-14) received from the variation function including one or more numerical parameters (i.e. voltages) (Grey et al.; column 30, lines 49-52 and column 46, lines 30-35), selectable alternatives of control parameters (Grey et al.; column 19, lines 33-39), alteration of a configuration of the device under test (Grey et al.; column 18, lines 62-63), or causing input signals to be supplied to the device under test (Grey et al.; column 10, line 62 to column 11, line 6 and column 19, line 64 to column 20, line 5).

With respect to claim 21, Perez discloses a computer readable medium containing program instructions, generated by a program designer, for carrying out the associated method (Grey et al.; column 11, lines 41-56).

With respect to claims 22 and 23, Perez discloses passing measurement data to the function call (Grey et al.; column 14, lines 37-50).

With respect to claim 29, Perez discloses that the function call instruction invokes an interface (Grey et al.; column 12, lines 41-47).

With respect to claims 19, 20, and 38, Perez discloses a plurality of variation points that access the user for the reception of measurement data using a plurality of application programming interfaces wherein the measurement data is provided by a plurality of user-defined variation functions (i.e. the user-defined variation functions are applicable anywhere in the sequence as well as in multiple concurrently executed sequences) (Grey et al.; column 13, lines 16-25 and 32-44 and column 14, lines 52-65).

With respect to claim 39, since the function calls disclosed by Perez are in the instruction code, operable to control the measurement process at a variation point in the code, and allows corresponding user input to modify the measurement process, it is considered inherent that the designer of the instruction program has anticipated that the user may want to interact with or modify the measurement process because the designer of the code would have eliminated the possibility of user intervention and would not have provided user prompts if such interaction was not desired.

With respect to claim 40, Perez discloses a measurement system comprising a physical interface operable to supply signals to a device under test and receive signals from a device under test (Grey et al.; column 10, line 51 to column 11, line 34).

As noted above, the invention of Perez teaches many features of the claimed invention and while the invention of Perez does teach preventing the user from

modifying the measurement process through particular sequences, Perez does not explicitly indicate that the program designer prevents the user from modifying the measurement process through the source code, thereby only allowing the user to modify the measurement process when desired (i.e. programmed) by the designer.

Organ teaches a single platform electronic tester comprising means for controlling testing of a DUT (column 4, lines 26-34) using a program executed by a user (column 4, lines 45-55) wherein the user is allowed to arrange the flow of test execution (column 4, lines 56-64) for performing measurements (column 6, lines 29-32) while the operator is allowed to selectively control modification of the test by preventing the user from modifying the test/measurement process/program (column 13, lines 30-32 and column 14, lines 13-17).

It would have been obvious to one having ordinary skill in the art to modify the invention of Perez to explicitly indicate that the program designer prevents the user from modifying the measurement process through the source code, thereby only allowing the user to modify the measurement process when desired (i.e. programmed) by the designer, as taught by Organ, because Organ suggests that the combination would have improved the operation of Perez by allowing increased control by the designer to insure that only those authorized can edit the source code of the program (Organ; column 13, lines 30-32 and column 14, lines 13-17) and thereby reduce the chance of a user improperly editing the program, as is recognized as being a problem by Perez (Perez; column 10, line 57 to column 11, line 14).

10. Claims 5, 6, 10-13, 34, and 35, as may best be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Perez in view of Organ and further in view of U.S. Patent Application Publication No. 2002/0026514 to Ellis et al.

As noted above, the invention of Perez and Organ teaches many of the features of the claimed invention and while the invention of Perez and Organ does teach connecting the process-modifying host computer to a plurality of specific test instruments (Grey et al., Figure 1), the combination does not specifically indicate that the measurement and process modification be carried out using two separate computers communicating using a Simple Object Access Protocol or Common Object Request Broker Architecture protocol.

Ellis teaches automated tool management in a multi-protocol environment comprising measuring/polling software located on a server computer system with corresponding processor and memory (0025) and user process control software (0007) located on a separate remote computer (0023), wherein the process control software and the monitoring/polling software communicate over a network using predetermined protocol including Common Object Request Broker Architecture and Simple Object Access Protocol (0007).

It would have been obvious to one having ordinary skill in the art to modify the invention of Perez and Organ to include specifying that the measurement and process modification be carried out using two separate computers communicating using a Simple Object Access Protocol or Common Object Request Broker

Architecture protocol, as taught by Ellis, because, as suggested by Ellis, the combination would have provided improved analysis and control by allowing input and diagnostics by a larger variety of users through remote access (0005 and 0008).

Response to Arguments

11. Applicant's arguments with respect to claims 1-29 and 31-40 have been considered but are moot in view of the new ground(s) of rejection.

The following arguments, however, are noted:

Applicant first argues:

Claims 1 and 21 define two entities: a designer of the computer program and a user of the measurement process. The examiner, in the advisory action dated April 4, 2006, asserts that the 'user' in Grey lines 41-53 is equivalent to the designer of claims 1 and 21. Appellant submits that Grey and Perez only disclose one category of user. That category of user is not prevented from modifying (base) test sequences and is therefore not equivalent to the user of claims 1 and 21 (the user of the measurement process). Further, in claims 1 and 21, the function call (to a function not specified by the designer) is inserted by the designer while the variation function is provided by the user. Neither Grey nor Perez disclose two categories of users, one that inserts function calls at variation points and one that supplies the functions.

The Examiner asserts that the invention of Grey/Perez discloses a designer of a computer program, wherein the computer program is used to control, test, measure, etc. instruments. After the test program is designed, it is executed. The entity who is executing the program is therefore a user. This user may be a separate entity, as Applicant considers with respect to the term "user", or may be the designer of the program who, by nature of "using" (i.e. executing) the program that he designed in order to perform testing/measurement, is now considered to be a "user." The

invention of Grey/Perez has to disclose some type of "user" in order for the program to have any type of functionality.

Claim 1 requires "a computer program containing a variation point at which a function call instruction is inserted by a designer of the computer program to pass control to a user-defined variation function...wherein the user is prevented from modifying the measurement process other than through the user-defined variation function." The Examiner asserts that the invention of Grey/Perez is disclosed from the point of view of a designer and therefore is presented to describe the various options that can be performed by a designer. The designer forms the measurement process that, if desired, interacts with the end user and allows the end user to provide the user-defined variation function. While the invention of Grey/Perez may not explicitly disclose that the user is prevented from modifying the measurement process other than through the user-defined variation function, this feature is considered to be inherent because the designer of the measurement process only provides interaction with the user when desired. Therefore, if the designer only provides predetermined points in the process where user interaction occurs, the user has no way to modify the process other than through these points provided by the designer. This is not explicitly stated in Grey/Perez because one having ordinary skill in the art recognizes that if a designer wants the user to modify the program, then when designing the program, the designer includes code to interact with the user and if the designer does not want the user to modify the program, then when designing the program, the designer simply does not include any code to interact

with the user. Therefore, the user does not and cannot modify the process in other ways since, once a user starts a program, the only time the user is permitted to modify the program is at points that were defined by the designer to interact with the user. This is well known in any type of programming.

Since this feature is very well-known, it is assumed that Applicant's limitation for specifying that "the user is prevented from modifying the measurement process other than through the user-defined variation function" is not with respect to user modification of the process through the program, which is only available if provided by the designer, but instead is with respect to preventing the user from modifying the actual program code through program editing tools outside of normal execution of the program. For this reason, a new ground of rejection has been presented relying on U.S. Patent No. 6,449,741 to Organ.

Applicant then argues:

In claims 1 and 21, a variation point is described as a point (in a computer program) at which a function call is inserted by a designer of the computer program to pass control to a user-defined variation function. Neither the Grey reference (US 6,401,220) nor Perez reference (US 6,907,557) disclose a variation point. Grey column 13, lines 50-58 and column 14, lines 52-61) describe the use of function calls, but these function calls are inserted by the user and relate to user-defined functions. Even if one were to consider the 'TestStand' as a tool for a designer, Grey would only disclose a function call inserted by the designer that relates to designer-defined functions. The function calls disclosed by Grey define the test process itself, not a variation to the test process. Specifically, Grey states "TestStand must also know the list of parameters that the code module requires" (column 13, lines 57-58). In contrast, the designer of claims 1 and 21 may not know in advance what variation the user will want to make. In the system disclosed by Grey, a user may make a variation to a test process by simply inserting a new function call (or equivalent in-line code). In the claims 1 and 21, the user is prevented from inserting function calls.

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To make a variation to the process the user defines variation functions that are associated with pre-existing function calls in the computer program that were inserted by the designer.

As noted above, the Examiner asserts that in order for interaction to occur with the end user, the program must inherently include a variation point in which control is passed to the user to allow such interaction.

The Examiner also asserts that Grey/Perez's disclosure on column 13, lines 57-58 that "TestStand must also know the list of parameters that the code module requires" does not indicate that the user cannot make variations to the test process since in common programming the program must know the parameters that the code module requires, usually set as definitions by the designer of the program, otherwise the program will not recognize what is being input.

Applicant argues:

With regard to claims 1 and 21, the examiner has opined that the test executive software of Grey column 11, lines 41-56 and column 12, lines 6-15 is equivalent to a computer program of claim 1. However, Grey column 2, lines 11-13 describes the test executive as 'a module or set of modules that provide an API for creating, editing, executing and debugging sequences'. See also column 1, lines 35-48. In the Grey reference it is the Test Sequence (defined in an associated Sequence File) that controls the series of steps in a test (see column 1, lines 62-64, column 2, lines 1-2, and column 4, lines 47-48, for example). In particular, column 1, lines 62-64, defines the sequences as "a series of steps that the user specifies for execution in a particular order" (emphasis added). Thus, it is the test sequence that controls the measurement process.

The Examiner asserts that Grey specifically indicates that "The test executive software allows the user to create, configure, and/or control test sequence execution

for various test applications, such as production and manufacturing test applications" (column 11, lines 50-53) and therefore the test executive does control the test sequence and is equivalent to the computer program of claim 1.

Applicant argues:

Regarding claim 21, the examiner refers to Grey column 11, lines 41-56, which describes a memory for storing the test executive software. However, lines 50-56 describe how the test executive software allows the user to create, configure and/or control test sequence execution. However, it does not disclose that the test sequences are stored in the memory.

The Examiner asserts that column 11, lines 41-56 of Grey indicates that the computer programs are stored on a memory and further, in column 2, lines 1-2, indicates that the test sequences are stored as a file, wherein it is considered to be inherent that the file must be stored in a memory.

Applicant argues:

In claim 2, the process modification software module includes an interface servicing element that services an interface realized by the measurement process. The examiner refers to Grey column 13, lines 7-30, which describes interfaces between the TestStand executive and the user. As argued above, the TestStand executive does not control a measurement process, rather it is a means to create a test sequence that controls a measurement process. Therefore, the TestStand executive is not equivalent to the computer program of claim 2. Further, claim 2 calls for the process modification software module to include an interface servicing element. In Grey column 13, lines 7-30 the interfaces are serviced by the user, not by a process modification software module.

The Examiner asserts that claim 2 only requires that “the process modification software module further comprises an interface servicing element that services an interface realized by the measurement process.” The Examiner maintains that Grey discloses a measurement process wherein column 13, lines 7-30 describe the interfacing between the measurement process and the user at run-time. Therefore, in order for the measurement process to obtain data from and interact with the user at run-time, the interface must be realized by the measurement process.

Applicant argues:

In claim 31, the variation function is accessed via an interface. In contrast, Grey column 13, lines 7-30 describes how user input to the TestStand executive is accessed via an interface with the user.

Claims 3, 4, 7, 32-33 and 36 further define the type of interface used and how it is specified. Again, the examiner references Grey column 13, lines 7-30, which describe interfaces between the user and the TestStand executive, rather than interfaces between the computer program and the process modification software module.

The Examiner again asserts that claim 2 only requires that “the process modification software module further comprises an interface servicing element that services an interface realized by the measurement process.” This limitation, as well as the specific types of interfaces as required by claims 3, 4, 7, 32-33, and 36, describe an interface for interacting with the user and do not require interfacing “between the computer program and the process modification software module” as argued by Applicant.

The Examiner maintains that, as noted above and as admitted by Applicant ("In the system disclosed by Grey, a user may make a variation to a test process by simply inserting a new function call (or equivalent in-line code);" Appeal Brief, page 8, lines 9-11), Grey/Perez discloses providing a user-generated process modification software module comprising the user-defined variation function for causing the variation and column 13, lines 7-30 of Grey indicates that in order to interact with the user, an interface is provided.

Applicant argues:

Claims 19-20 depend from claim 1 and claim 38 depends from claim 21 and relate to a use of multiple variation points. Grey does not disclose variation points inserted by a designer at which calls to user-defined variation functions are made. Grey column 13, lines 16-25 describes a run-time operator interface used to start, stop and step execution of a one or sequences. A variation point is point at which a function call is inserted by a designer. In contrast, a break-point, or stop-point, in the execution is point chosen by the user. Grey does not disclose that variation functions are called at stop points.

The Examiner maintains that the variation points are points in the test sequence execution (i.e. program defining a measurement process) in which a function call passes control to a user-defined variation function. The Examiner maintains that in column 13, lines 16-25, Grey discloses that the run-time interfaces allow a user to control multiple step executions and column 14, lines 52-65 describes such a step execution being controlled by providing a user-defined variation function.

Applicant argues:

With regard to claim 29, the examiner refers to Grey column 12, lines 41-47. This does not disclose that the function calls inserted by a designer invoke interfaces with user-defined variation functions. Rather, it just describes how sequences and sub-sequences (routines and subroutines) can communicate via interfaces.

The Examiner asserts that column 14, lines 52-65 of Grey discloses that the user-defined function passes values to code modules and column 12, lines 41-47 of Grey discloses that the code modules are accessed by function calls invoking an interface.

Applicant argues:

With regard to claim 39, the examiner appears to suggest that a variation point is equivalent to a user prompt. However, claim 21, from which claim 39 depends, defines a variation point to be a point within a program of instructions at which the designer has placed a function call instruction to pass control to user-defined variation function. This is not equivalent to a user prompt, which passes control to the user. Further, claim 21 calls for the function call to be associated with the variation function prior to execution of the measurement process. In contrast, user input is provided during execution. Thus, even if user input were used to select a function to be executed, this association would not occur prior to execution of the measurement process.

As noted above, the Examiner asserts that when a designer of a program desires interaction with a user, the designer must provide a point in execution of the program wherein user interaction is initiated. A user prompt is such a point in a program wherein user interaction is initiated and therefore is properly considered to be a variation point. The Examiner further asserts that in order for the program to contain a point in execution of the program wherein the user is prompted, even if the user

input is provided during execution, this point must be associated with the program prior to execution.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U.S. Patent No. 6,308,326 to Murphy et al. teaches run-time modules for dynamically adjusting computer operation.

U.S. Patent No. 6,769,114 to Leung teaches methods and apparatus for preventing software modification from invalidating previously passed integration tests.

U.S. Patent Application Publication No. 2003/0046665 to Ilin teaches a reusable software component for textually supplementing, modifying, evaluating, and processing procedural logic for a compiled host program at run-time.

U.S. Patent No. 6,766,514 to Moore teaches a compiler having real-time tuning, I/O scaling and process test capability.

U.S. Patent No. 6,351,843 to Berkley et al. teaches dynamically inserting a function into an application executable at runtime.

U.S. Patent No. 6,202,043 to Devoino et al. teaches a computer based system for imaging and analyzing a process system and indicating values of specific design changes.

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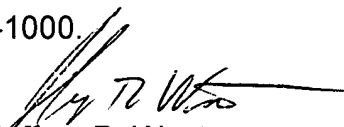
U.S. Patent No. 6,163,879 to Mackey teaches an interface and method for facilitating writing and modifying of lines of programming code.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Jeffrey R. West
Examiner – AU 2857

January 8, 2007